

Pittsburg district; Cumberland, Md., and Riverton, Va., Washington district; Frankfort and Highbridge, Ky., Louisville district; Camden on Gauley, W. Va., Williamson, W. Va., and Warfield, Ky., Cincinnati district; and New Madrid, Mo., Memphis district. Those closed were the special river stations at Arlington, Mo., St. Louis district; Philippi, W. Va., Pittsburg district; Lock No. 4 (Lincoln), Ala., Montgomery district; and the special rainfall station at Cumberland, Md., Washington district.

Thirteen new river gages were installed and a large number of others thoroughly repaired.

The service has not only maintained its previous high reputation for efficiency, but has still further added to it.

As an evidence of this it is only necessary to refer to the steady increase in the number of requests for the benefits of the River and Flood Service.

While there were no really great floods during the year, there were several of somewhat decided proportions, particularly those of the Ohio River in April, the upper Tennessee in May and the rivers of the Atlantic States in December. Accounts in detail of these and other floods will be found in the MONTHLY WEATHER REVIEW for the appropriate months.

The highest and lowest river stages for the year, together with the mean stage and annual range, at 134 selected stations are given in Table VIII.—*H. C. Frankenfield, Forecast Official.*

GENERAL CLIMATIC CONDITIONS.

By ALFRED J. HENRY, Professor of Meteorology.

ATMOSPHERIC PRESSURE.

The numerical values of annual mean pressures for 1901 are given in Tables I and II. The method of reduction to sea level in use during the year was the same as in former years, with the exception that an appropriate correction for variations in the force of gravity with latitude has been applied since January 1, 1899. In other respects the annual mean values are comparable with those of the preceding and other years in which Professor Hazen's method of reduction was used.

In addition to the table of reduced pressures, referred to in the preceding paragraph, a second table has been formed (Table III), in conformity with the custom of previous years, by reducing the actual pressures to sea level and standard gravity in accordance with the tables and methods of the International Meteorological Committee, as explained in the MONTHLY WEATHER REVIEW for 1895, Volume XXIII, pages 492-494. The reduced pressures so obtained appear in Table III and on Chart I. The data in the last column of Table III are the pressures at 10,000 feet above sea level, obtained by assuming a uniform decrement of temperature at the rate of 2° F. per 1,000 feet (0.37° C. per 100 meters), as in former annual summaries; the resulting isobars are shown on Chart II.

The distribution of mean pressure at sea level for 1901 is shown by the isobars on Chart I.

The configuration of the isobars for 1901 differs very slightly from that of 1900. Pressure was below normal over the eastern part of the country by amounts ranging from .02 to .05 inch; it was also below the normal in the Rocky Mountain region by amounts ranging from .01 to .08 inch. In the upper and middle Mississippi Valley and on the Pacific coast it was normal or slightly above.

TEMPERATURE.

The distribution of mean surface temperature is shown on Chart III, and the district departures by Table A.

Mean temperature was above the average in all parts of the country, except the South Atlantic and east Gulf States, the Ohio Valley, and Tennessee. The excess ranged from a fraction of a degree on the Pacific coast and in the Southwest to about 4° over the northeastern Rocky Mountain slope and Manitoba. Maximum temperatures of 110° and over were registered in southern Illinois, northern Arkansas, Missouri, southern Iowa, eastern Kansas, Oklahoma, eastern Montana, and South Dakota. Maximum temperatures of 110° were also registered in the Great Valley of California and in the desert region of northwestern Utah. The minimum temperatures of the year were not greatly different from those of the preceding year. Temperature fell to 40° below zero and lower in eastern Wyoming, southwestern South Dakota and northwestern Nebraska. The maximum, minimum, and mean surface temperatures are graphically shown on Chart III.

PRECIPITATION.

The distribution of annual precipitation is shown on Chart IV and the district departures by Table B. The year, as a whole, was marked by large local variations. It was unusually dry in the Ohio Valley, portions of the lower Lake region, and the Mississippi Valley south of Iowa. On the eastern Florida coast there was an excess of 18 inches at Jupiter and on the western coast a deficit of 10 inches at Tampa. The precipitation at Charleston, S. C., was 24 inches below the normal, and at Charlotte, N. C., 11 inches above the normal. There was an excess of rain in the upper Missouri Valley and also in the southern slope region. Rainfall was deficient on the Pacific coast and over practically all of the Plateau region.

THUNDERSTORMS.

The frequency of thunderstorm days in the different months and in the several States and Territories is shown approximately by the figures of Tables V and VI. The first-named table has been prepared from reports of both regular and voluntary observers with a view to showing the number of thunderstorm days recorded each month in the immediate neighborhood of the respective stations. The second table shows the number of days on which thunderstorms were recorded in the State or Territory as a whole. In preparing the last-named table reports from all stations whatsoever were used. The number of thunderstorm days for a given State, as shown in Table VI, depends largely upon the size of the State and the number and distribution of observing stations. In the District of Columbia, for example, with but one station, the number of thunderstorm days was 37, while for the adjacent State of Maryland, with an average of 58 stations, thunderstorms were observed on 123 days. In Virginia, with about 54 stations, the number of thunderstorm days was 130. The number of thunderstorms observed at a single station bears a fairly definite relation to the number that would be observed were it possible to greatly enlarge the field of observation. The ratio for Washington, D. C., is about 3.5, that is to say, in order to ascertain the number of thunderstorm days for a region equal in area to the adjoining States of Maryland and Virginia we have only to multiply the number observed at Washington by the constant 3.5.

Thunderstorms were reported on a greater number of days in 1901 than in 1900 in southern New England, the upper Ohio Valley, and the eastern portion of the Middle Atlantic States, also on the Pacific coast south of Washington, the southern Plateau and in the Southwest; elsewhere, the number reported during 1901 was considerably less than in the preceding year.

TABLE A.—Average monthly and annual departures of temperature from the normal during 1901.

Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
New England.....	-0.3	-4.3	+1.1	+0.6	-1.5	+0.6	-1.9	+1.4	+1.7	+1.4	-4.5	+0.4	-0.2
Middle Atlantic.....	+1.1	-5.5	+2.8	-1.4	-1.3	+0.2	+3.5	+1.3	+1.1	-0.5	-4.2	-1.7	-0.3
South Atlantic.....	-0.0	-5.1	+0.9	-5.5	-0.0	-0.7	+1.1	+0.5	+0.4	-0.4	-4.9	-2.8	-1.4
Florida Peninsula.....	-0.5	-5.3	-2.0	-4.3	-0.2	-0.4	-0.2	+1.0	+0.2	-0.6	-4.3	-2.0	-1.7
East Gulf.....	+1.4	-5.5	-1.0	-4.9	-0.4	+0.9	+1.1	+0.4	-0.3	+0.2	-2.4	-4.2	-1.3
West Gulf.....	+5.9	-2.6	+0.5	-3.3	-0.1	+1.8	+1.9	+2.7	-0.1	+2.3	+2.4	-3.7	+0.6
Ohio Valley and Tennessee.....	-1.3	-7.1	+1.3	-4.7	-1.3	+1.2	-4.6	+1.0	-0.3	-1.7	-2.9	-5.4	-0.3
Lower Lakes.....	+1.7	-2.3	+1.6	+0.6	-1.0	+0.5	+4.4	+1.9	+1.0	-1.6	-2.5	-2.1	-0.2
Upper Lakes.....	+2.9	-4.6	+0.8	+3.3	+0.8	+1.2	-3.7	+2.0	+0.8	-2.9	+0.2	-2.9	+0.9
North Dakota.....	-5.5	+0.3	+5.5	-3.5	-7.2	-1.9	-3.6	+1.2	-2.6	-4.6	+2.1	-0.3	+5.5
Upper Mississippi Valley.....	+6.2	-5.6	+1.0	+0.3	+0.8	+3.1	-7.3	+2.4	+0.5	+3.7	+0.3	-5.1	+1.2
Missouri Valley.....	+3.0	-1.6	+2.4	+0.7	+2.3	+2.8	-3.3	+2.3	-0.7	-4.6	+3.0	-4.7	+2.4
Northern Slope.....	-7.3	-1.7	+2.8	+0.3	+5.9	-2.6	-4.9	+2.5	-2.0	-4.8	+5.3	+1.3	+2.4
Middle Slope.....	+5.4	-2.5	0.0	-2.2	-0.7	+3.1	+5.5	+2.3	+0.2	-4.0	+5.1	-2.0	+1.7
Southern Slope.....	+5.2	-2.3	+0.8	-2.6	-1.6	+2.0	+2.5	+2.9	+0.9	-4.0	+4.0	-1.8	+1.2
Southern Plateau.....	+5.1	+1.0	-1.0	-2.5	-1.4	-2.4	+1.4	+0.3	-1.2	+1.5	+4.3	+1.4	+0.2
Middle Plateau.....	+5.7	+2.8	+0.9	-1.1	-2.4	-2.7	+2.2	+0.9	-2.6	-4.0	+4.3	-2.3	+1.6
Northern Plateau.....	+4.0	+1.6	+2.2	-1.2	+3.4	-3.9	+1.7	+4.0	-2.0	-5.8	+4.7	+1.5	+1.7
North Pacific.....	-0.4	+1.4	-0.4	-2.5	-1.3	-3.2	-3.0	+1.2	-1.3	-5.0	+3.0	-0.3	-0.1
Middle Pacific.....	-0.3	+1.2	+1.7	-1.9	-1.5	-0.8	-1.2	-0.7	-1.7	-3.5	+2.0	+1.2	+0.2
South Pacific.....	+2.2	+2.1	+2.7	-1.6	-1.4	-0.7	0.0	+0.6	-2.6	+1.1	+2.1	+1.8	+0.5

TABLE B.—Monthly and annual departures of precipitation from the normal during 1901.

Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
New England.....	-1.3	-2.6	+1.7	+3.0	+1.9	-1.0	-0.4	+0.5	-0.1	-1.3	-2.1	+3.6	+0.3
Middle Atlantic.....	-1.2	-2.5	-0.2	+1.8	+0.9	-1.1	-0.3	+2.4	-0.6	-1.3	-1.3	+2.6	+1.3
South Atlantic.....	-1.4	-0.2	-0.2	+0.1	+0.4	+0.7	-0.3	+0.6	0.0	-2.5	-1.9	+0.7	-2.0
Florida Peninsula.....	-0.3	0.0	+1.9	-0.8	+0.2	+2.9	-0.5	+1.4	-0.0	-3.2	-1.7	+0.4	+1.3
East Gulf.....	-0.6	+0.1	-0.4	+1.4	+0.8	-2.2	+0.3	+1.6	-0.9	-1.3	-1.9	+2.6	0.5
West Gulf.....	-1.8	-1.6	-1.2	-0.9	-2.1	-2.6	+0.1	-0.9	+1.3	+0.7	-2.0	-0.8	-11.3
Ohio Valley and Tennessee.....	-1.3	-3.0	-0.8	+0.2	-2.1	-0.4	-2.4	+1.4	-0.1	-1.3	-2.4	+1.6	-9.5
Lower Lakes.....	-0.6	-0.9	+0.1	+0.6	-0.5	-0.7	0.0	+1.0	0.0	-1.5	-0.8	+1.4	-1.6
Upper Lakes.....	-0.6	-0.9	+0.8	-1.4	-1.4	-0.6	+1.3	-1.2	-0.6	-0.4	-1.0	-0.6	-6.3
North Dakota.....	-0.3	-0.2	-0.1	-0.6	0.0	+3.0	+1.0	-0.1	+0.7	+0.4	-0.5	+0.2	+1.3
Upper Mississippi Valley.....	-0.6	-0.3	+0.5	-1.3	-2.1	-0.6	-1.3	-1.6	0.0	-0.9	-1.2	-0.3	-10.2
Missouri Valley.....	-0.6	-0.2	+0.3	-1.0	-2.1	-0.1	-1.7	-1.1	+2.3	+0.2	-0.2	+0.2	-5.1
Northern Slope.....	-0.4	0.0	0.0	+0.4	+0.3	+0.7	+0.1	-0.2	+0.7	-0.4	-0.3	+0.5	+1.5
Middle Slope.....	-0.6	-0.2	-0.6	+0.9	-1.2	-1.1	-1.5	-1.0	-0.2	+0.2	-0.3	-0.4	-6.0
Southern Slope.....	-0.8	0.0	-1.0	+0.4	+0.3	-2.6	-1.7	-0.8	-0.6	-0.5	+0.5	-0.9	-7.2
Southern Plateau.....	0.0	+1.6	-0.6	-0.1	+0.4	-0.2	-0.2	+0.4	-0.4	+0.3	-0.2	-1.1	-0.1
Middle Plateau.....	-0.4	+0.7	-0.2	-0.1	+0.2	-0.1	-0.3	+1.0	-0.5	0.0	-0.4	-0.2	-0.3
Northern Plateau.....	-0.4	+0.2	-0.5	-0.3	-0.1	-0.3	-0.2	+0.3	-0.3	-0.3	-0.3	-0.1	-2.3
North Pacific.....	-0.1	+0.3	-1.2	+1.3	+0.4	-0.1	-0.3	-0.3	-0.1	-1.3	+2.5	-2.1	-0.5
Middle Pacific.....	+1.0	+2.0	-2.8	+0.2	-0.7	-0.5	0.0	0.0	+1.2	-0.1	+0.3	-2.3	-2.6
South Pacific.....	+1.8	+1.7	-1.6	-0.4	+0.5	-0.1	0.0	0.0	+0.1	+0.6	-0.5	-3.2	-1.1

TABLE C.—Monthly and annual departures of relative humidity from the normal, 1901.

Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
New England.....	-1	-10	+1	+9	+4	-3	+2	+3	+0	-1	-4	+4	+0.4
Middle Atlantic.....	-1	-9	0	+1	+3	+1	+5	+3	+2	-1	-2	+4	+0.3
South Atlantic.....	-4	-11	+5	+6	+3	+2	0	+3	+0	-2	-10	+1	-2.3
Florida Peninsula.....	-4	-11	+4	+7	+5	+1	0	+0	+1	-1	-9	+1	-2.4
East Gulf.....	-4	-10	+8	+5	+3	+2	+4	+1	+0	-3	-9	+1	-4.5
West Gulf.....	-3	+2	-4	+3	0	+2	-3	+3	+1	+2	-2	+2	+1.7
Ohio Valley and Tennessee.....	-3	+1	+0	+2	+1	+2	+4	+1	+2	+2	-2	+3	+1.1
Lower Lakes.....	-1	0	+1	+2	+1	+2	+2	+1	+2	+3	0	+4	+1.3
Upper Lakes.....	-2	+1	+5	+5	+4	+3	+2	+3	+2	+0	+1	+2	+1.3
North Dakota.....	1	2	+2	+5	+7	+6	+6	+3	+11	+5	+2	+2	+3.2
Upper Mississippi Valley.....	+1	+1	+3	0	+1	+5	+11	+3	+2	+2	+4	+6	-1.3
Missouri Valley.....	-10	+2	+4	+1	+5	+5	+13	+1	+1	+3	+5	+4	-2.6
Northern Slope.....	+1	+2	+2	+5	+3	+5	+2	+1	+5	+9	+1	+10	+6.7
Middle Slope.....	-4	+6	+2	+9	+3	+5	+11	+3	+4	+7	+0	+6	+0.3
Southern Slope.....	-10	0	-13	+2	+6	-10	-3	+3	+3	+4	+7	+1	-2.3
Southern Plateau.....	-3	+3	+4	+3	+3	-2	-3	+1	+5	+2	+4	-11	-1.0
Middle Plateau.....	-2	+14	+3	+3	+3	+1	+1	+1	+3	+9	+2	-3	+2.0
Northern Plateau.....	+1	+1	0	+0	+2	+1	+2	+2	+5	+0	+1	-3	-0.0
North Pacific.....	0	+4	-10	-9	0	-9	-3	-5	-4	-1	+6	-13	-4.2
Middle Pacific.....	0	+4	-10	-9	0	-9	-3	-5	-4	-1	+6	-13	-4.2
South Pacific.....	-3	+3	-7	-2	+4	0	0	+3	+2	+2	+11	-14	0.0

TABLE D.—Monthly and annual departures of average cloudiness from the normal, 1901.

Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
New England.....	+0.6	-1.1	+1.1	+2.1	+1.1	-0.9	+1.1	+0.6	-0.5	-0.9	+1.0	+0.6	+0.4
Middle Atlantic.....	+0.3	-1.1	+0.4	+1.4	+1.3	-0.4	+0.7	+0.6	-0.1	-1.0	+0.3	+0.5	+0.3
South Atlantic.....	-0.3	-1.0	-0.2	-0.3	+0.8	+0.2	0.0	+0.3	-0.1	-1.1	-1.2	+0.4	-0.2
Florida Peninsula.....	-0.5	-0.5	-0.4	-0.6	-0.5	+0.5	+0.6	+0.6	+0.4	+0.1	-1.2	+0.3	-0.1
East Gulf.....	-0.7	0.0	-0.4	0.0	-0.1	-0.4	0.0	+0.5	+0.1	-1.2	-0.9	+0.6	-0.2
West Gulf.....	0.0	+0.4	-1.5	-0.6	-0.3	-1.1	+0.2	-0.6	-0.1	-0.5	-0.2	-1.1	-0.4
Ohio Valley and Tennessee.....	-0.2	+0.4	+0.3	+0.7	+0.2	-0.8	-1.1	+0.8	-0.4	-1.4	-1.0	+0.6	-0.3
Lower Lakes.....	+0.7	+0.5	+0.9	+0.5	+1.0	0.0	-0.3	-0.9	-0.2	-0.9	+0.8	-0.1	+0.3
Upper Lakes.....	+0.5	+0.5	+1.3	+0.5	+0.6	0.0	+0.3	+0.1	+0.5	-0.5	+0.6	+0.5	+0.2
North Dakota.....	-0.4	-1.1	-0.5	+0.1	-2.2	+0.5	-0.6	-0.2	+1.6	-1.0	-1.0	+1.1	-0.3
Upper Mississippi Valley.....	-0.3	-1.0	+1.0	-0.4	-0.5	-0.7	-1.1	-0.6	+0.2	-0.5	-1.3	+0.8	-0.4
Missouri Valley.....	-0.9	-0.8	+0.1	-0.3	-1.2	-0.6	-1.6	-0.8	+0.5	+0.3	-0.8	+0.6	-0.5
Northern Slope.....	0.0	+0.1	-0.1	-0.2	-0.6	+0.5	-1.2	-0.7	+1.2	-0.8	0.0	+1.0	-0.1
Middle Slope.....	0.0	+0.8	+0.1	+0.3	-0.2	-0.8	-0.6	0.0	+0.8	+0.7	+0.4	+0.6	+0.3
Southern Slope.....	+1.1	+0.6	-0.6	0.0	+0.1	-1.6	+0.2	-1.1	+0.8	+1.4	+0.9	-0.8	+0.1
Southern Plateau.....	+0.6	+0.8	-0.6	+0.4	+0.4	-0.4	-0.4	-0.5	-1.0	+0.8	+0.7	-1.0	0.0
Middle Plateau.....	+0.2	+2.0	-0.1	+0.3	+0.6	+0.2	+0.1	+1.4	-0.9	+0.9	-1.0	-0.8	+0.4
Northern Plateau.....	-0.3	-0.3	-0.7	-0.3	+0.1	+0.4	-1.1	-0.1	+1.0	-1.2	-0.6	-0.5	-0.2
North Pacific.....	+0.4	-0.7	+0.5	-0.4	+0.7	+0.4	+0.5	-0.6	+0.1	-0.3	-1.3	+0.3	+0.3
Middle Pacific.....	+0.5	+1.4	-1.3	-0.3	+0.2	-0.6	-0.4	+1.3	+0.6	+1.0	+2.2	-2.1	+0.3
South Pacific.....	+0.9	+0.5	-1.6	-0.6	+0.6	-0.3	-0.6	+0.2	0.0	+0.2	+0.9	-1.7	-0.1

SPECIAL CONTRIBUTIONS.

CLIMATOLOGY OF COSTA RICA.

Communicated by H. PITTIER, Director, Physical Geographic Institute.

TABLE 1.—Hourly observations at the Observatory, San Jose de Costa Rica, during December, 1901.

Hours.	Pressure.		Temperature.		Relative humidity.		Rainfall.			
	Observed, 1901.	Normal, 1898-1900.	Observed, 1901.	Normal, 1898-1900.	Observed, 1901.	Normal, 1898-1900.	Observed, 1901.	Normal, 1898-1900.	Duration, 1901.	
1 a. m.	3.60	3.64	16.40	16.46	85	85	0.0	0.5	0.00	
2 a. m.	3.21	3.23	16.13	16.33	86	87	0.0	1.9	0.00	
3 a. m.	2.98	2.96	15.74	16.23	88	87	0.0	0.4	0.00	
4 a. m.	3.05	3.02	15.42	16.06	88	87	0.0	0.5	0.00	
5 a. m.	3.24	3.25	15.42	16.00	87	87	0.0	1.5	0.00	
6 a. m.	3.50	3.63	15.42	16.01	87	87	0.0	1.3	0.00	
7 a. m.	3.86	4.10	16.66	17.01	81	88	0.0	1.1	0.00	
8 a. m.	4.18	4.47	18.72	18.61	73	78	0.0	0.9	0.00	
9 a. m.	4.35	4.67	20.76	20.43	68	73	0.0	0.6	0.00	
10 a. m.	4.42	4.62	22.38	21.84	65	69	0.0	0.5	0.00	
11 a. m.	4.03	4.33	23.35	22.58	64	67	1.3	1.8	0.66	
12 m.	3.57	3.76	23.93	23.08	64	67	2.5	2.0	1.17	
1 p. m.	2.97	3.17	22.76	23.24	64	67	1.0	2.1	0.83	
2 p. m.	2.59	2.77	23.69	23.24	65	68	2.6	2.7	2.60	
3 p. m.	2.37	2.42	23.80	23.24	67	69	3.4	2.4	1.25	
4 p. m.	2.36	2.52	21.23	21.09	73	74	1.2	5.5	0.58	
5 p. m.	2.60	2.75	19.72	19.73	75	77	3.0	3.0	1.43	
6 p. m.	2.92	3.16	18.90	18.64	80	81	5.5	2.0	2.43	
7 p. m.	3.39	3.67	18.52	18.04	82	83	0.1	2.3	0.75	
8 p. m.	3.84	3.97	18.14	17.69	83	84	0.3	1.1	1.00	
9 p. m.	4.21	4.42	17.77	17.41	84	85	0.0	1.3	0.00	
10 p. m.	4.34	4.48	17.36	17.07	85	86	0.0	1.2	0.00	
11 p. m.	4.26	4.31	16.93	16.85	85	86	2.0	1.8	0.92	
Midnight	4.06	4.01	16.52	16.62	86	87	2.3	0.8	0.92	
Mean.....	3.50	3.54	18.98	18.63	78	80				
Minimum.....	660.4	659.23	11.9	9.2						
Maximum.....	668.3	667.82	29.3	29.2			2.3			
Total.....							25.2	39.0	13.92	

REMARKS.—The barometer is 1,160 meters above sea level. Readings are corrected for gravity, temperature, and instrumental error. The dry and wet bulb thermometers are 1.5 meters above ground and corrected for instrumental errors. The hourly readings for pressure, wet and dry bulb thermometers, are obtained by means of Richard registering instruments, checked by direct observations every three hours from 7 a. m. to 10 p. m. The hourly rainfall is as given by Hottinger's self-register, checked once a day. Under maximum, the greatest hourly rainfall for the month is given. The standard rain gage is 1.5 meters above ground. In the Costa Rican system the San Jose local time is used, which is 0° 36' 13.3" slower than seventy-fifth meridian time.

TABLE 2.

Time.	Sunshine.		Temperature of the soil at depth of—					Cloudiness observed, 1901.
	Observed, 1901.	Normal, 1898-1900.	0.15 m.	0.30 m.	0.60 m.	1.20 m.	3.00 m.	
	Hours.	Hours.	° C.	° C.	° C.	° C.	° C.	%
7 a. m.	6.33	4.89	19.12	19.33	19.98	20.51	21.00	36
8 a. m.	23.75	17.86						
9 a. m.	24.00	18.54						
10 a. m.	18.91	17.43	19.35	19.41	20.01	20.58		51
11 a. m.	17.68	15.40						
12 m.	17.16	18.98						
1 p. m.	14.98	14.17	19.74	19.55	20.03	20.50		62
2 p. m.	16.76	14.95						
3 p. m.	16.61	14.32						
4 p. m.	14.40	14.03	19.84	19.58	20.03	20.44		67
5 p. m.	7.99	9.85						
6 p. m.	1.41	1.77						
7 p. m.			19.76	19.59	20.03	20.42		56
8 p. m.								
9 p. m.								
10 p. m.			19.68	19.57	20.00	20.40		41
11 p. m.								
Midnight								
Mean.....			19.60	19.51	20.00	20.46	21.00	55
Total.....	179.48	157.74						

TABLE 3.—Rainfall at stations in Costa Rica, December, 1901.

Stations.	Amount.	No. rainy days.	Stations.	Amount.	No. rainy days.
1. Sipurio (Talamanca).....	310	16	14. Juan Vinas.....	109	9
2. Boca Banano.....	366	24	15. Santiago.....	174	14
3. Limon.....	284	15	16. Paraiso.....	43	9
4. Swamp Mouth.....			17. Las Conchavos.....	38	13
5. Zent.....	391	14	18. Cartago.....	68	14
6. Gute Hoffnung.....			19. Tres Rios.....	57	9
7. Siquirres.....	396	10	20. S. Francisco G.....	27	9
8. Guapiles.....	417	18	21. San Jose.....	25	11
9. Sarapiquí.....	689	24	22. La Verbena.....	145	6
10. San Carlos.....	175	18	23. Nuestro Amo.....		
11. Las Lomas.....	490	16	24. Alajuela.....		
12. Turrialba.....			25. San Isidro Alajuela.....	52	6
13. Peralta.....	304	18			

Notes on the weather.—On the Pacific slope, fine weather, without any excess of temperature or humidity, prevailed up to the 28th, after which there came a succession of stormy and relatively icy days. On the 31st, 10 a. m., the highest